

U.S. Patent Application Serial No. 10/079,401
Amendment dated April 6, 2004
Reply to OA of December 23, 2003

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1 Claim 1 (Currently Amended): A method for testing the crimped state of a test terminal
2 on the basis of a waveform of characteristic values obtained in the process of crimping the test
3 terminal on a core of an electric wire, comprising the steps of:

4 acquiring a reference waveform from a characteristic waveform when a first terminal has
5 been crimped normally, and dividing the reference waveform into first plural reference waveform
6 segments, the reference waveform showing changes in load at regular time intervals
7 corresponding to time elapsed when the first terminal is crimped normally, each of the first plural
8 reference waveform segments corresponding to a segment of time elapsed when the first terminal
9 is crimped normally;

10 dividing the waveform obtained when the test terminal is crimped on the electric wire
11 into second plural waveform segments corresponding to those of the reference waveform; and
12 deciding whether or not the crimped state of the test terminal is good on the basis of the
13 first reference waveform segments of the reference waveform and the second waveform
14 segments of the waveform obtained when the test terminal is crimped.

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1 Claim 2 (Previously Presented): The method of testing the crimped state of a test
2 terminal according to claim 1, wherein singular points of the reference waveform are previously
3 acquired on the basis of increments of the reference waveform; and said first reference waveform
4 segments contain said singular points.

1 Claim 3 (Previously Presented): The method of testing the crimped state of a test
2 terminal according to claim 1, wherein singular points of the reference waveform are previously
3 acquired on the basis of increments of the reference waveform; and said first reference waveform
4 segments are located between the singular points.

1 Claim 4 (Currently Amended): A method for testing the crimped state of a test terminal
2 on the basis of a waveform of characteristic values obtained in the process of crimping the test
3 terminal on a core of an electric wire, comprising the steps of:

4 acquiring a reference waveform from a characteristic waveform when a first terminal has
5 been crimped normally, the reference waveform showing changes in load at regular time
6 intervals corresponding to time elapsed when the first terminal is crimped normally;
7 acquiring singular points of the reference waveform on the basis of increments thereof,
8 the increments corresponding at least to a maximum change in load per unit time and a zero
9 change in load per unit time;

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10 acquiring first reference waveform segments which are segments containing the singular
11 points;

12 acquiring second waveform segments containing points corresponding to said singular
13 points in the waveform obtained when the test terminal has been crimped on the electric wire;
14 and

15 deciding whether or not the crimped state of the test terminal is good on the basis of said
16 first reference waveform segments and said second waveform segments.

1 Claim 5 (Previously Presented): The method of testing the crimped state of a test
2 terminal according to claim 2, wherein said singular points are points where the increments of
3 said reference waveform correspond to at least one selected from among a maximum change in
4 load per unit time and a zero change in load per unit time.

1 Claim 6 (Currently Amended): A method for testing the crimped state of a test terminal
2 on the basis of a waveform of characteristic values obtained in the process of crimping the test
3 terminal on a core of an electric wire, comprising the steps of:

4 acquiring a reference waveform from a characteristic waveform when a first terminal has
5 been crimped normally, and acquiring reference characteristic values at regular intervals of the
6 reference waveform, the reference waveform showing changes in load at regular time intervals
7 corresponding to time elapsed when the first terminal is crimped normally;

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8 acquiring characteristic values of the waveform obtained when the test terminal has been
9 crimped on the electric wire, at said regular intervals; and
10 deciding whether or not the crimped state of the test terminal is good on the basis of said
11 reference characteristic values and the characteristic values of the waveform obtained when the
12 test terminal has been crimped.

1 Claim 7 (Previously Presented): The method of testing the crimped state of a test
2 terminal according to claim 2, wherein said electric wire has a coating for coating said core,
3 said test terminal has caulking legs for caulking said core,
4 a first poorness waveform is acquired from the waveform obtained when the test terminal
5 is crimped when said caulking legs caulk said coating as well as said core, and
6 a first singular point of said singular points is acquired from said reference waveform and
7 said first poorness waveform.

1 Claim 8 (Previously Presented): The method of testing the crimped state of a test
2 terminal according to claim 7, wherein said first singular point is defined by a point where a
3 characteristic value of said first poorness waveform exceeds that of said reference waveform as
4 the time of the crimping of the test terminal elapses.

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1 Claim 9 (Previously Presented): The method of testing the crimped state of a test
2 terminal according to claim 2, wherein
3 said core is composed of a plurality of conductors tied up in a bundle;
4 said test terminal has caulking legs for caulking said core;
5 a second poorness waveform is acquired from the waveform obtained when the test
6 terminal is crimped when said caulking legs caulk conductors whose number is smaller than that
7 when the first terminal has been normally crimped; and
8 a second singular point is acquired from said reference waveform and said second
9 poorness waveform.

1 Claim 10 (Previously Presented): The method of testing the crimped state of a test
2 terminal according to claim 9, wherein said second singular point is defined by a point where a
3 characteristic value of said second poorness waveform falls below that of said reference
4 waveform as the time of the crimping of the test terminal elapses.